FIG. 1

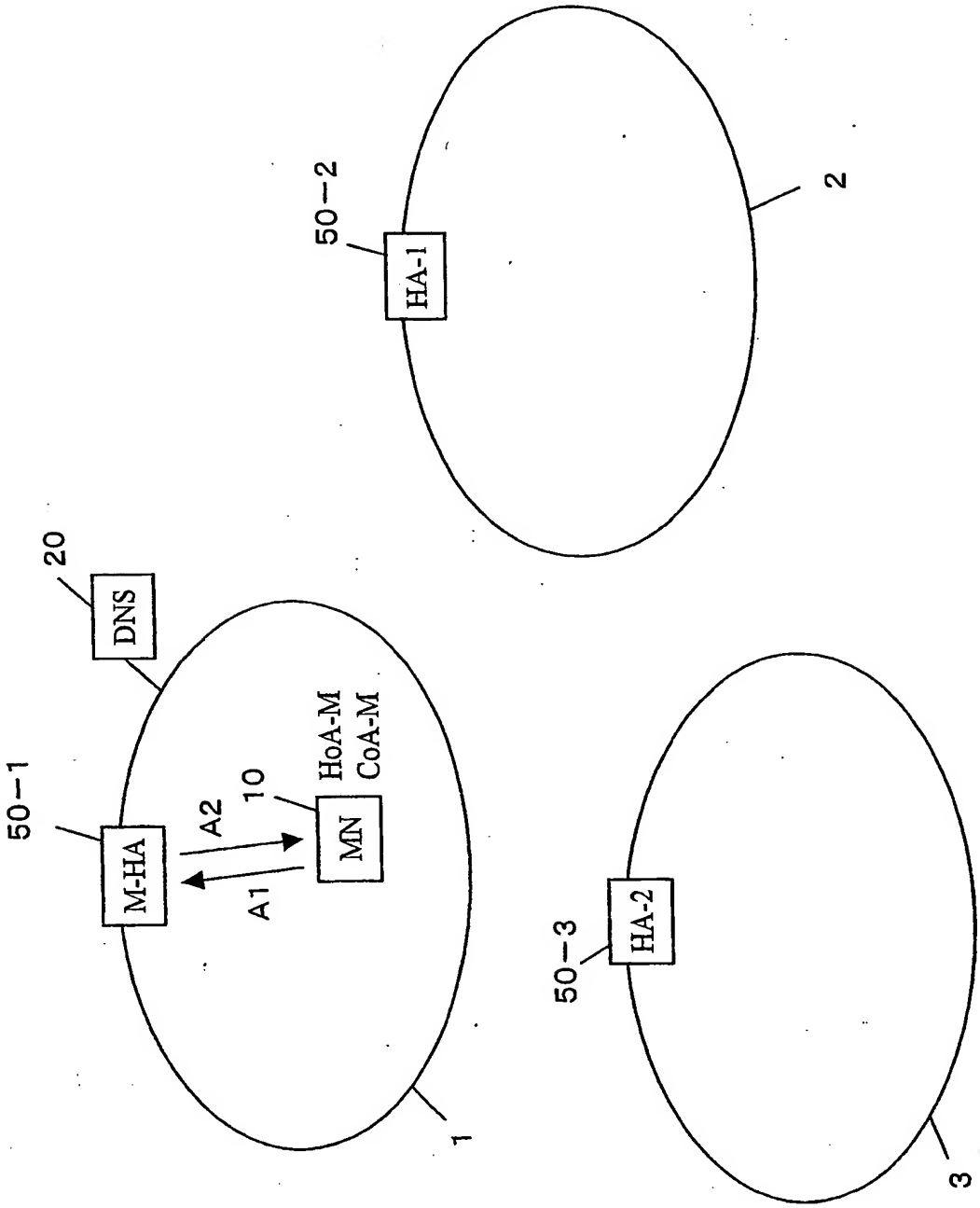


FIG. 2

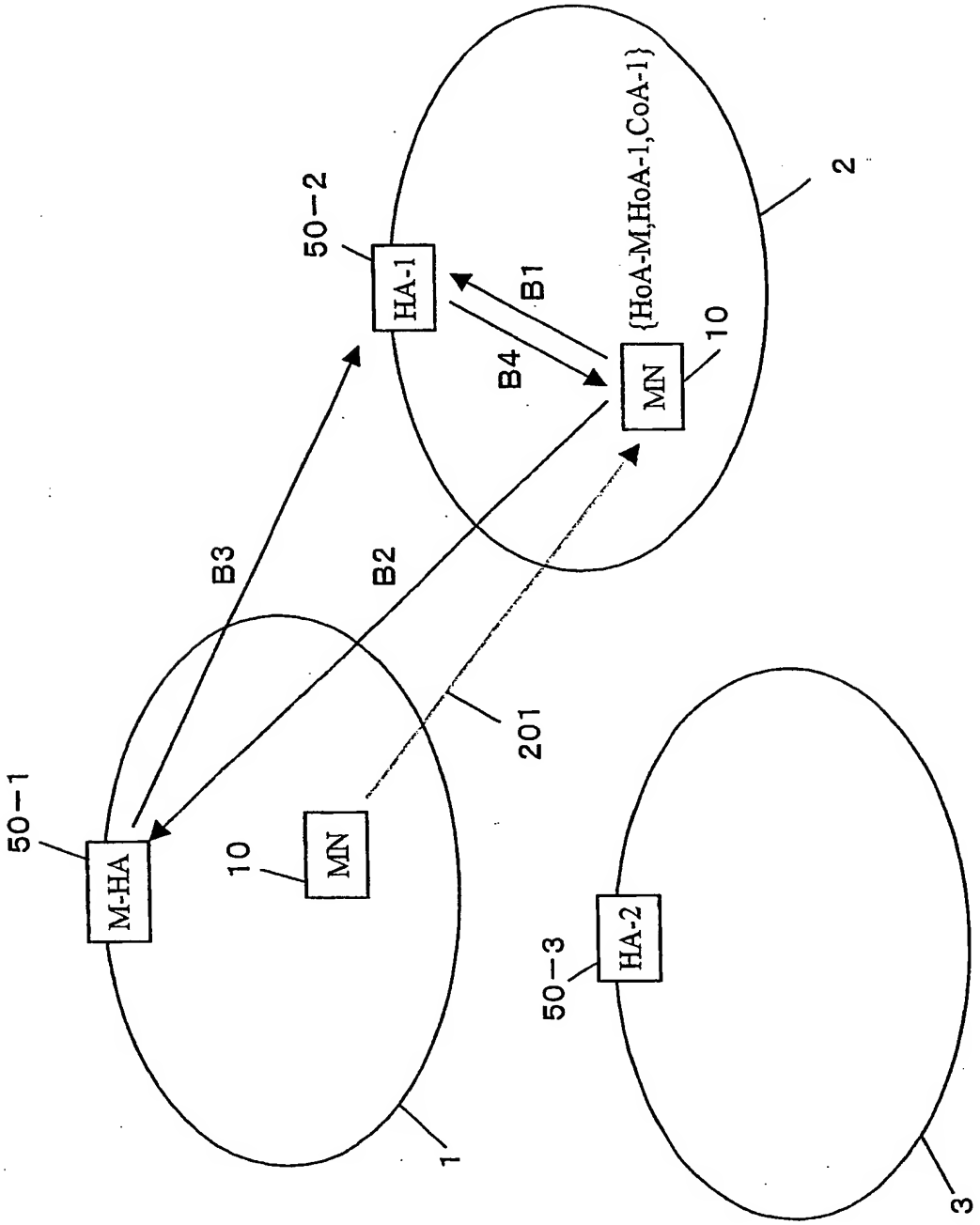

50-2
HA-1
B1
B4
{HoA-M,HoA-1,CoA-1}
MN
10
2
B3
B2
201
50-1
M-HA
10
MN
50-3
HA-2
1
3

FIG. 3

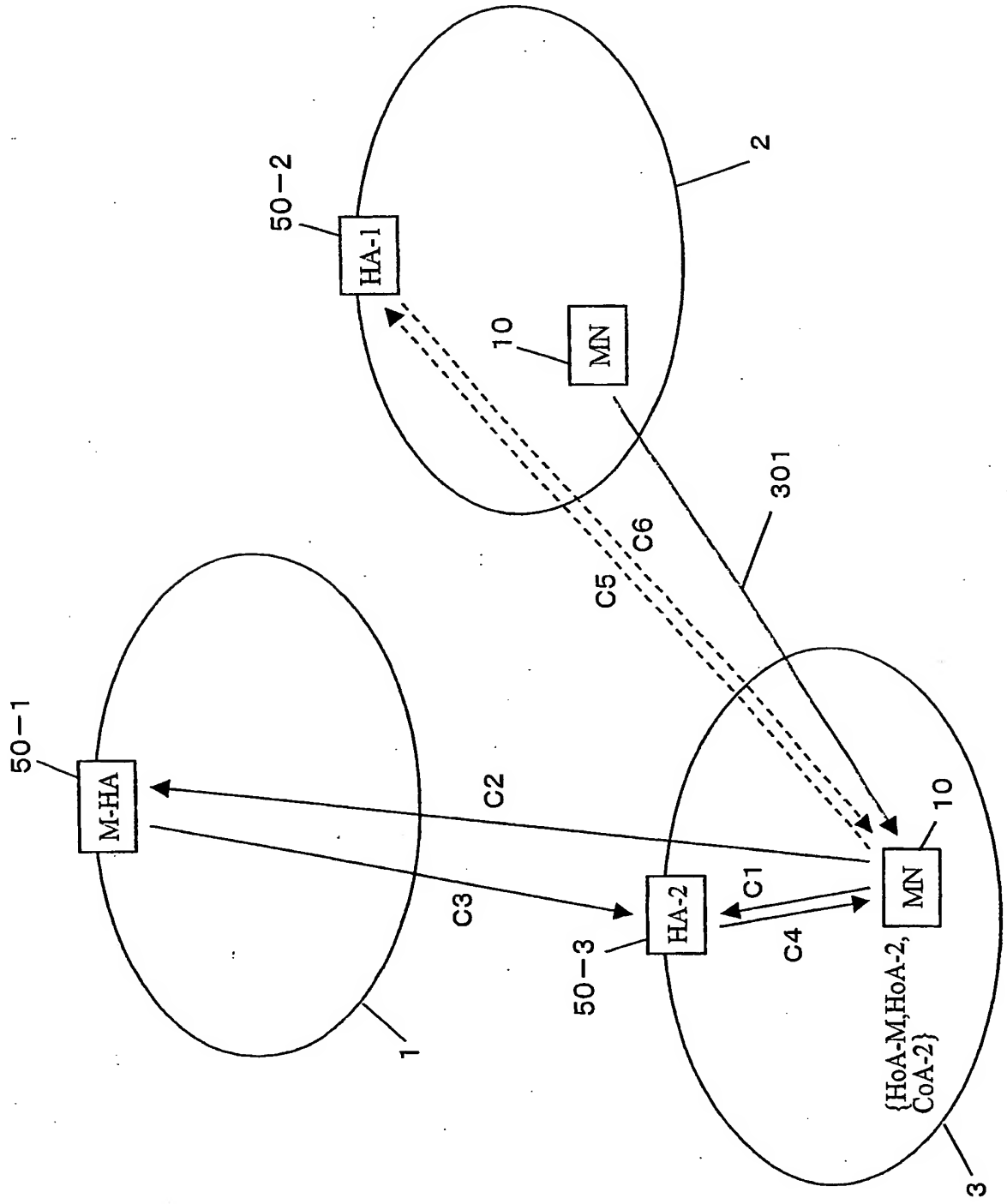
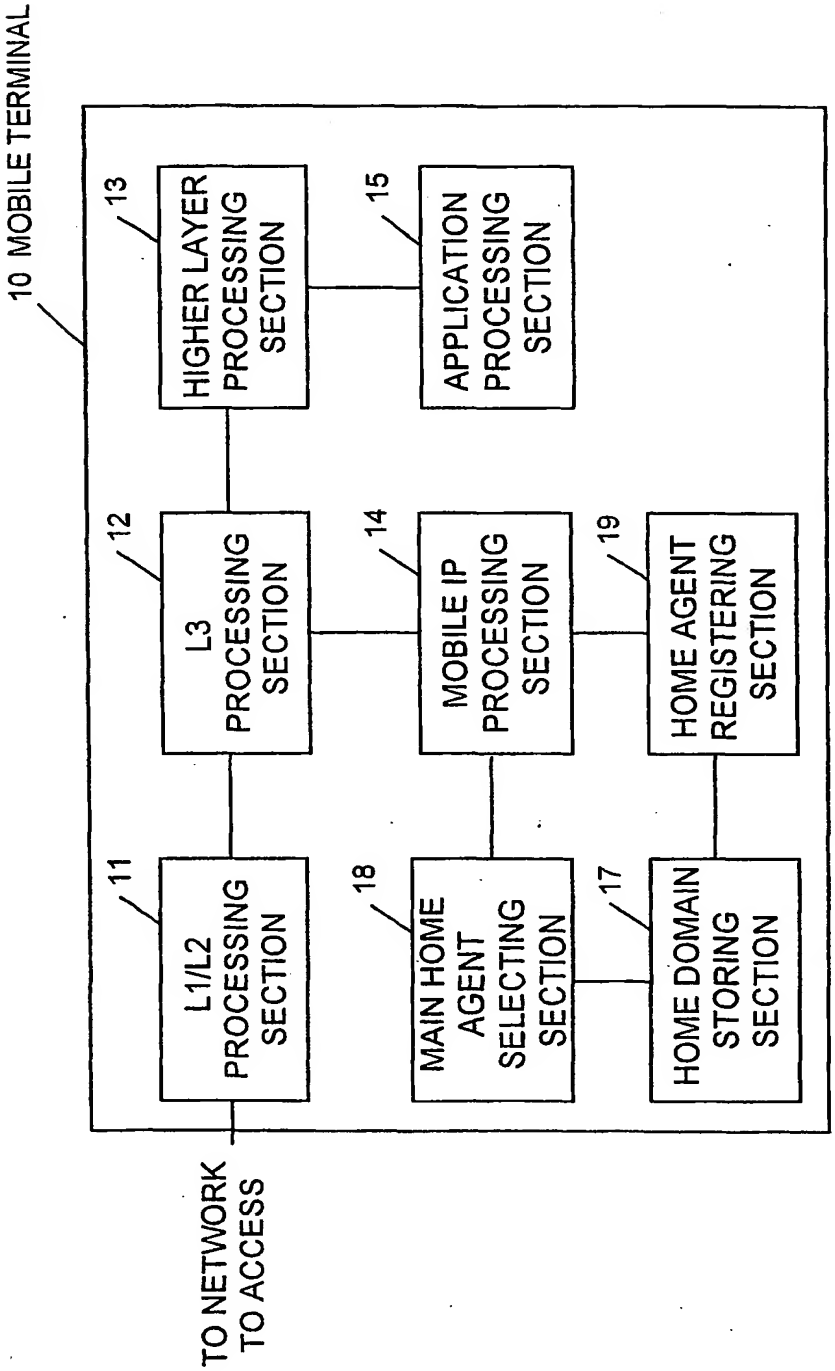

2
50−2
HA-1
10
MN
301
C5
C6
50−1
M-HA
C2
C3
HA-2
C1
C4
50−3
10
MN
{HoA-M,HoA-2,
CoA-2}
1
3

FIG. 4


10 MOBILE TERMINAL
13
HIGHER LAYER PROCESSING SECTION
15
APPLICATION PROCESSING SECTION
12
L3 PROCESSING SECTION
14
MOBILE IP PROCESSING SECTION
19
HOME AGENT REGISTERING SECTION
11
L1/L2 PROCESSING SECTION
18
MAIN HOME AGENT SELECTING SECTION
17
HOME DOMAIN STORING SECTION
TO NETWORK TO ACCESS

WO 2004/014027 PCT/IB2003/002969
10/501564

FIG. 5

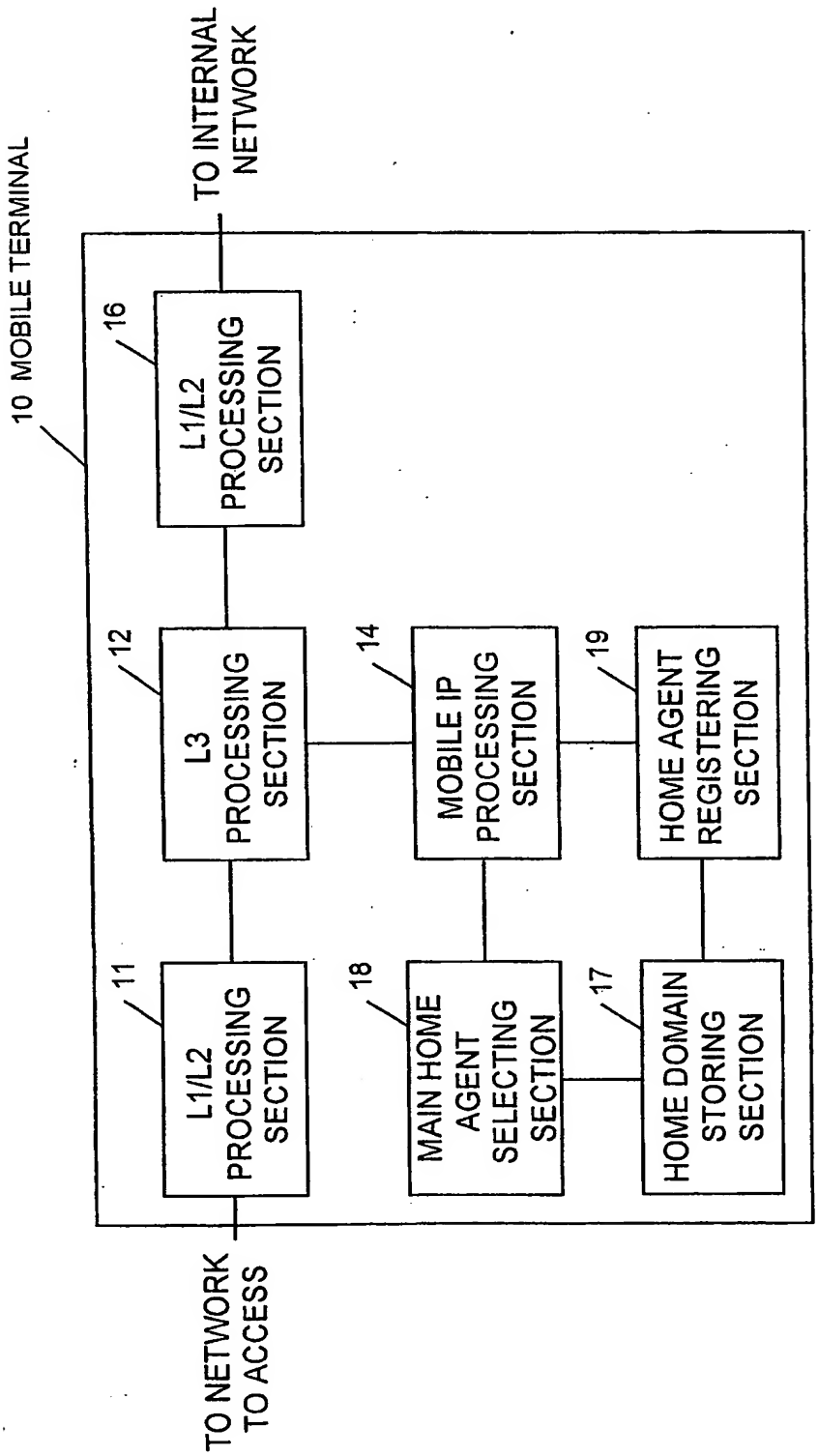


FIG. 6

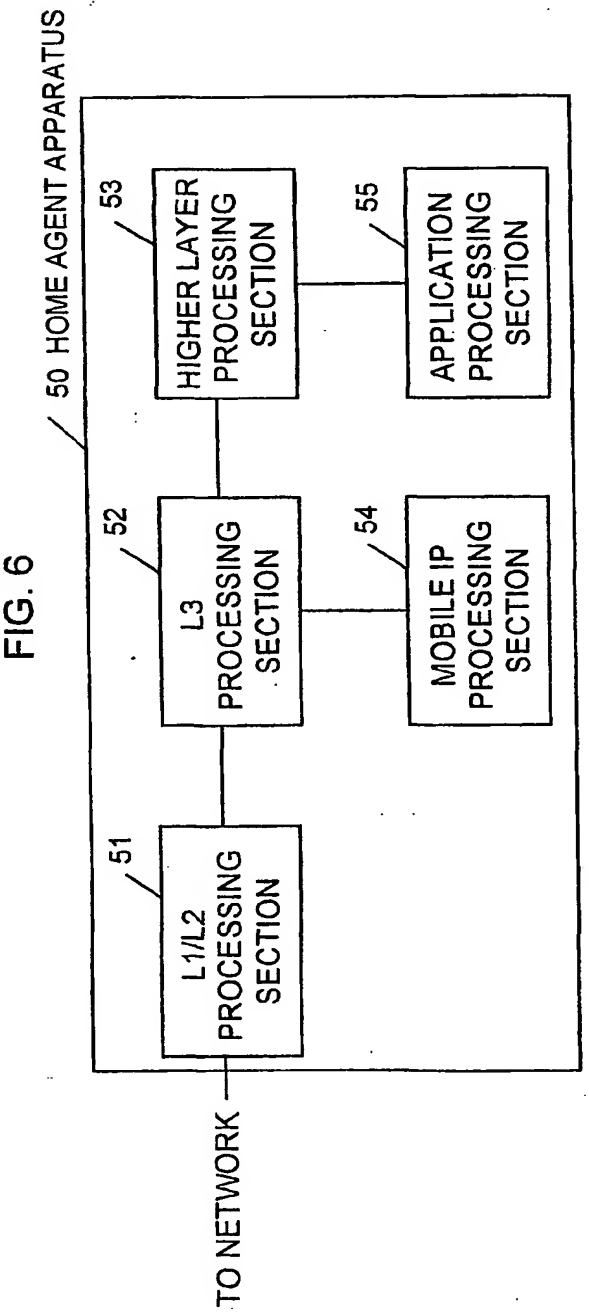
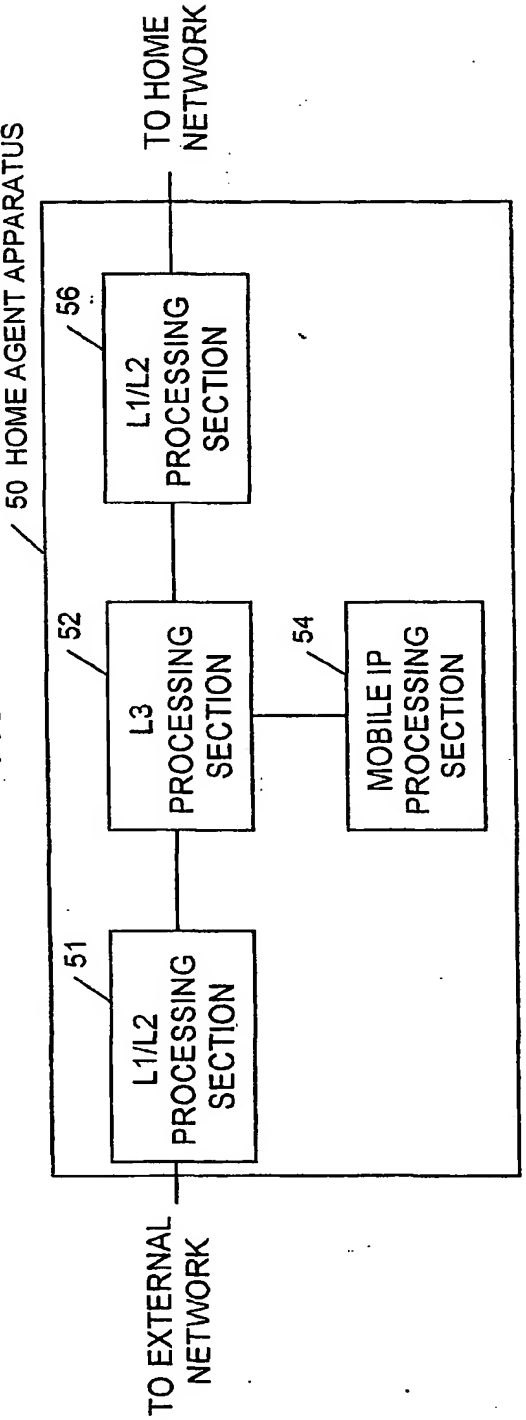

50 HOME AGENT APPARATUS
53
HIGHER LAYER PROCESSING SECTION
55
APPLICATION PROCESSING SECTION
52
L3 PROCESSING SECTION
54
MOBILE IP PROCESSING SECTION
51
L1/L2 PROCESSING SECTION
TO NETWORK

FIG. 7


50 HOME AGENT APPARATUS
TO HOME NETWORK
56
L1/L2 PROCESSING SECTION
52
L3 PROCESSING SECTION
54
MOBILE IP PROCESSING SECTION
51
L1/L2 PROCESSING SECTION
TO EXTERNAL NETWORK

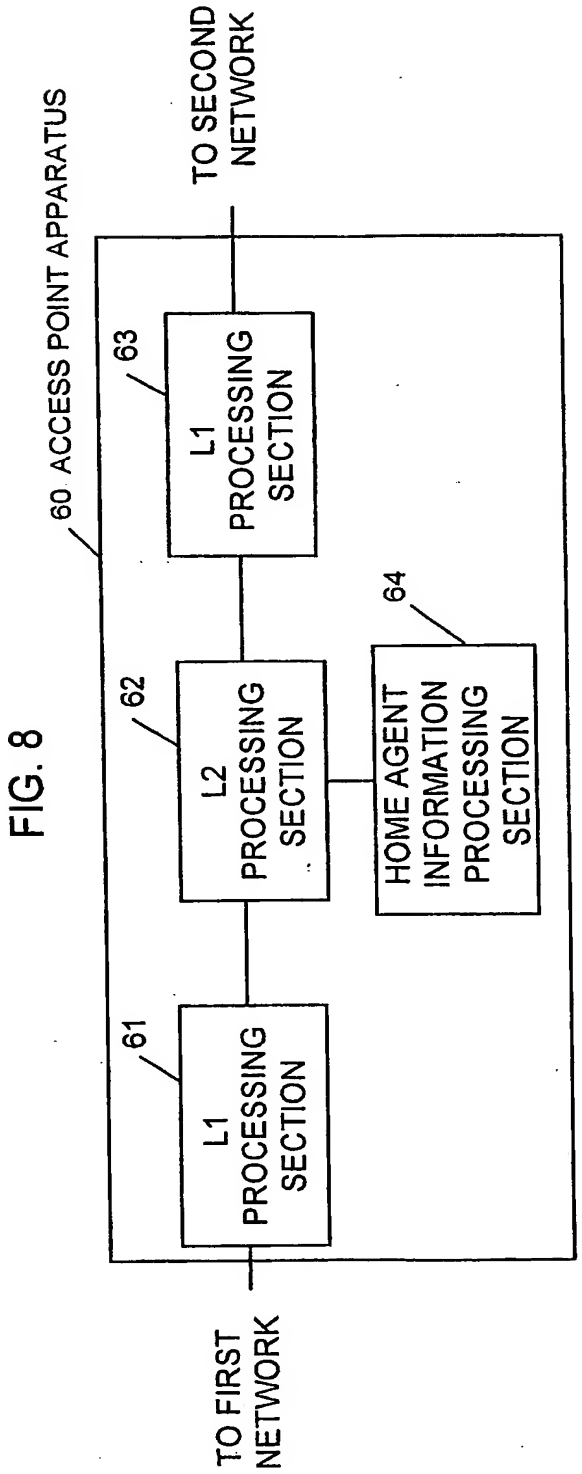

60 ACCESS POINT APPARATUS
TO SECOND NETWORK
TO FIRST NETWORK
61
L1 PROCESSING SECTION
62
L2 PROCESSING SECTION
63
L1 PROCESSING SECTION
64
HOME AGENT INFORMATION PROCESSING SECTION

FIG. 8

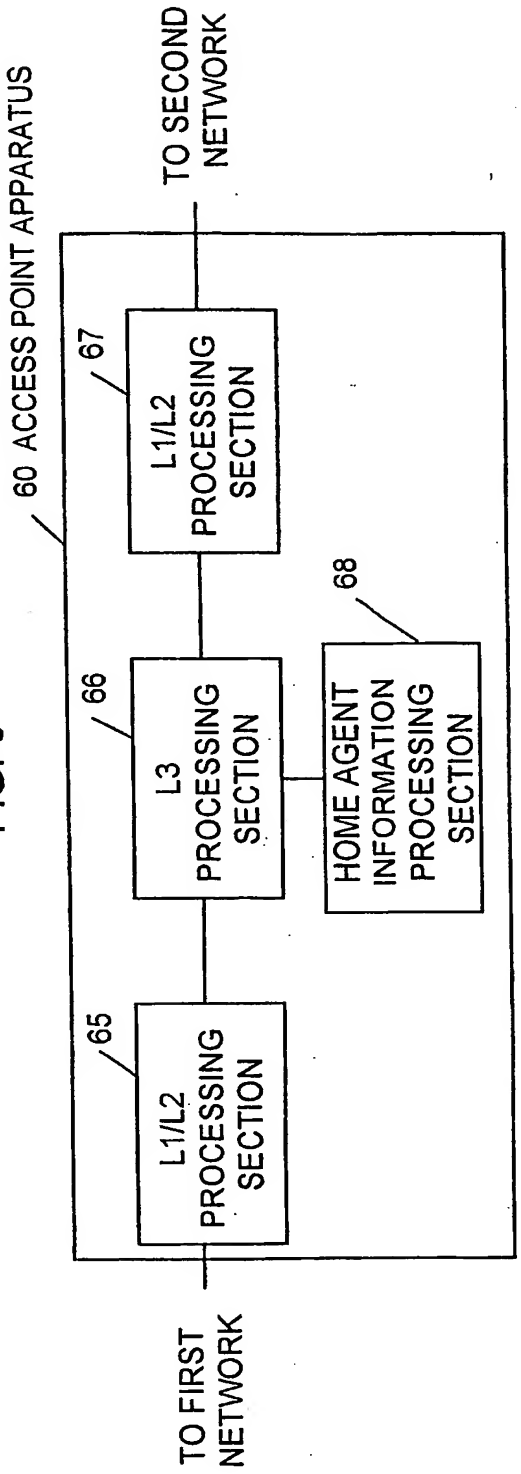

60 ACCESS POINT APPARATUS
TO SECOND NETWORK
TO FIRST NETWORK
65
L1/L2 PROCESSING SECTION
66
L3 PROCESSING SECTION
67
L1/L2 PROCESSING SECTION
68
HOME AGENT INFORMATION PROCESSING SECTION

FIG. 9

FIG. 10

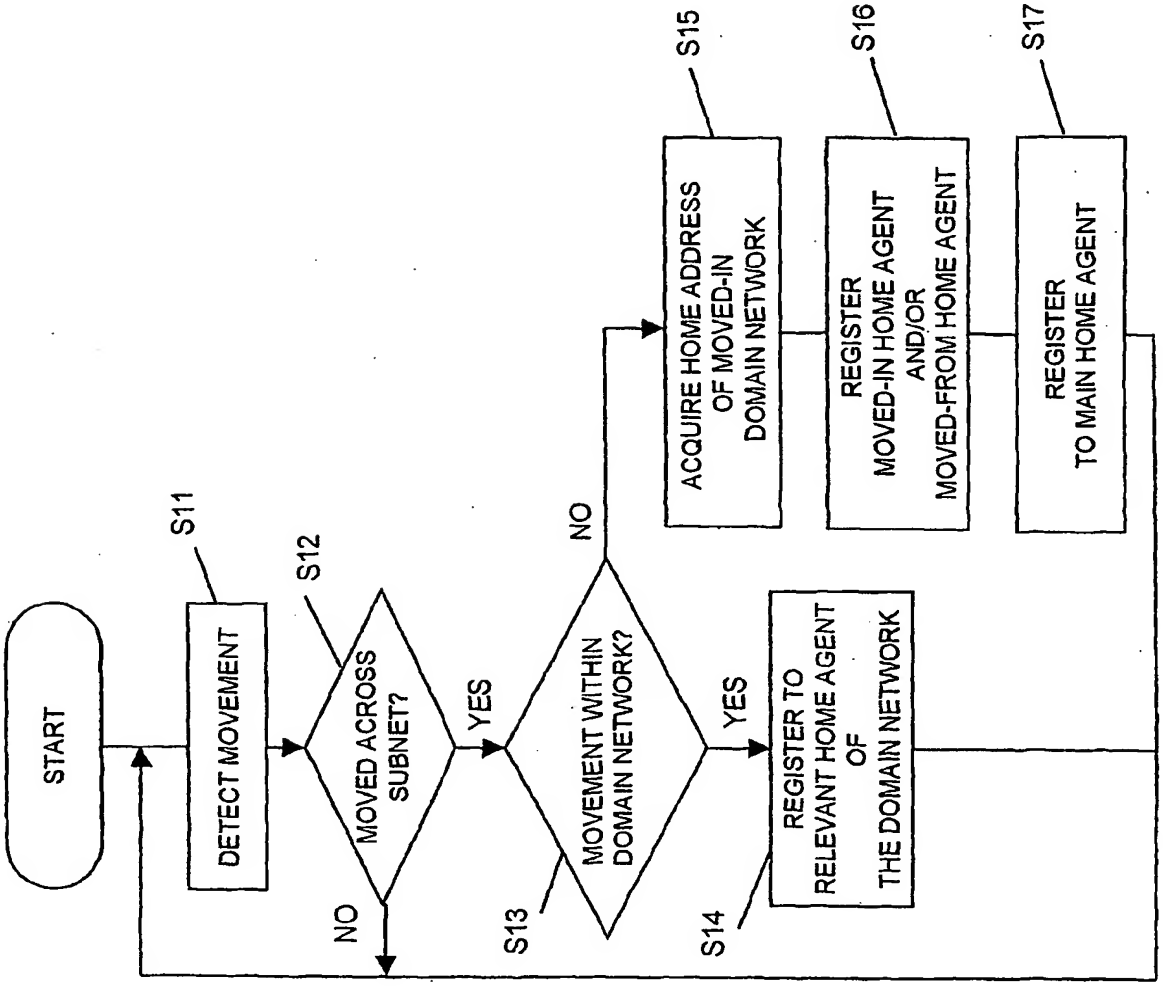

START
S11
DETECT MOVEMENT
S12
MOVED ACROSS SUBNET?
YES
NO
S13
MOVEMENT WITHIN DOMAIN NETWORK?
YES
NO
S14
REGISTER TO RELEVANT HOME AGENT OF THE DOMAIN NETWORK
S15
ACQUIRE HOME ADDRESS OF MOVED-IN DOMAIN NETWORK
S16
REGISTER MOVED-IN HOME AGENT AND/OR MOVED-FROM HOME AGENT
S17
REGISTER TO MAIN HOME AGENT

FIG. 11

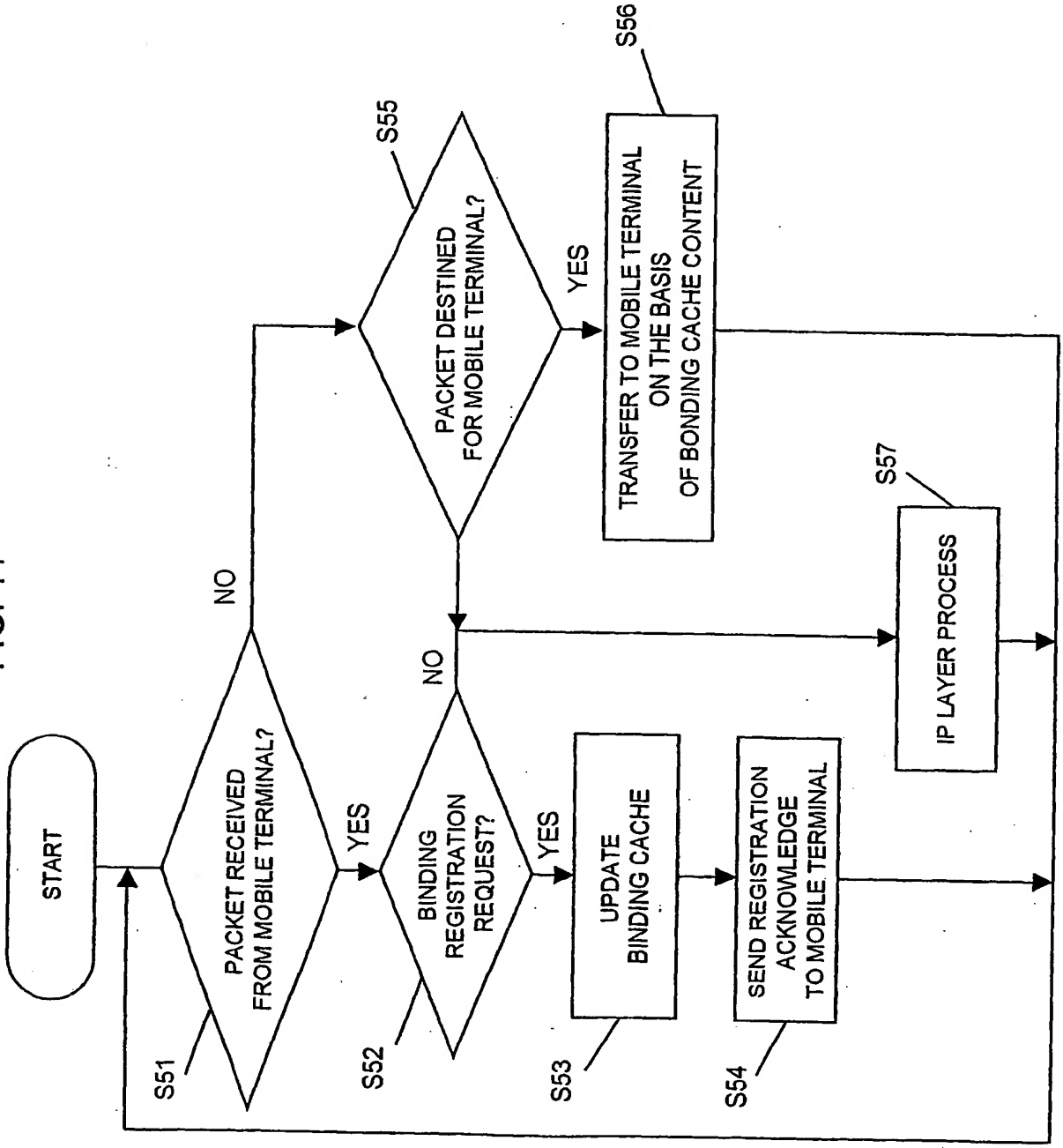

START
PACKET RECEIVED FROM MOBILE TERMINAL?
S51
NO
YES
BINDING REGISTRATION REQUEST?
S52
NO
YES
PACKET DESTINED FOR MOBILE TERMINAL?
S55
NO
YES
UPDATE BINDING CACHE
S53
SEND REGISTRATION ACKNOWLEDGE TO MOBILE TERMINAL
S54
TRANSFER TO MOBILE TERMINAL ON THE BASIS OF BONDING CACHE CONTENT
S56
IP LAYER PROCESS
S57

FIG. 13

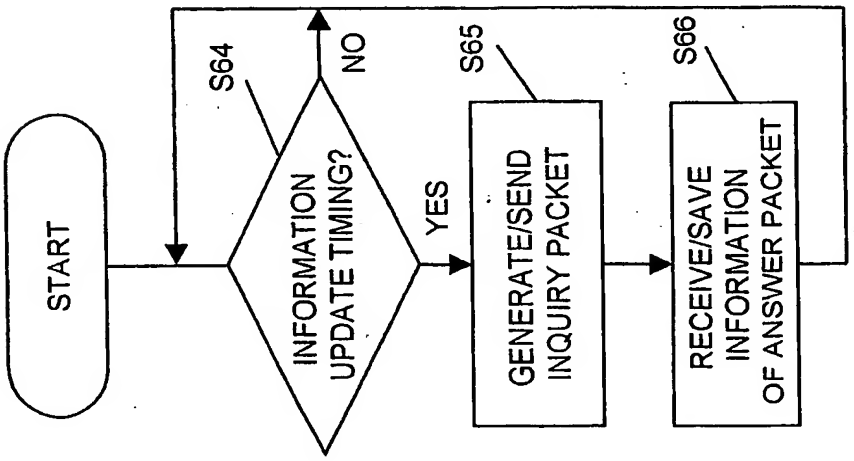

START
INFORMATION UPDATE TIMING?
S64
NO
YES
GENERATE/SEND INQUIRY PACKET
S65
RECEIVE/SAVE INFORMATION OF ANSWER PACKET
S66

FIG. 12

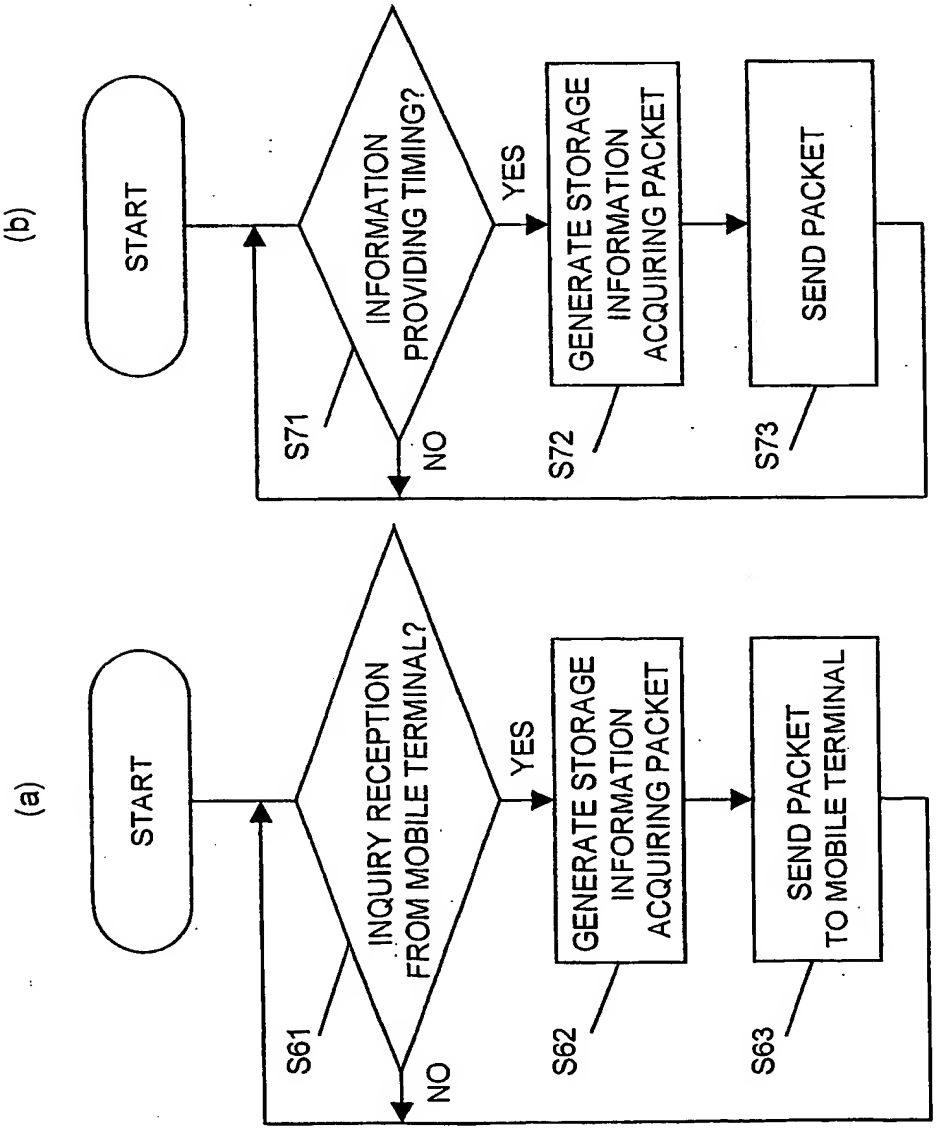

(b)
START
INFORMATION PROVIDING TIMING?
S71
NO
YES
GENERATE STORAGE INFORMATION ACQUIRING PACKET
S72
SEND PACKET
S73
(a)
START
INQUIRY RECEPTION FROM MOBILE TERMINAL?
S61
NO
YES
GENERATE STORAGE INFORMATION ACQUIRING PACKET
S62
SEND PACKET TO MOBILE TERMINAL
S63

FIG. 14

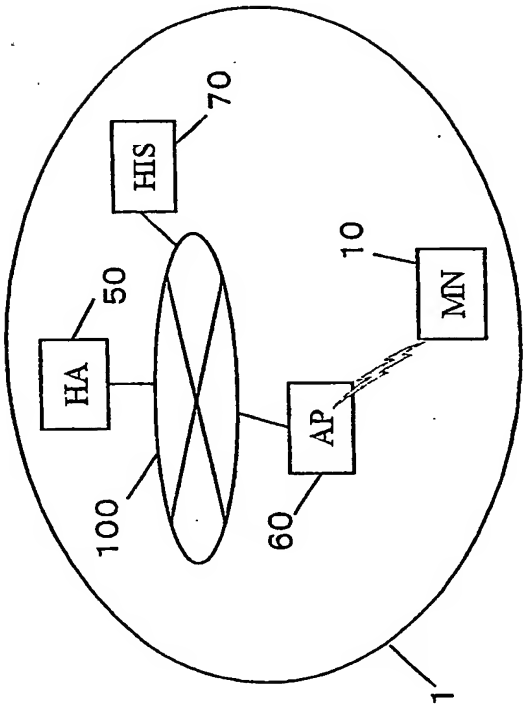


FIG. 15

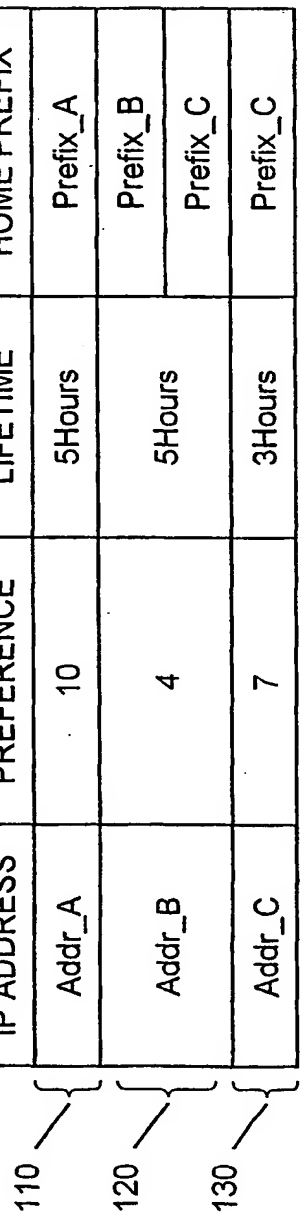

141
142
143
144
IP ADDRESS
PREFERENCE
LIFETIME
HOME PREFIX
Addr_A
10
5Hours
Prefix_A
Addr_B
4
5Hours
Prefix_B
Prefix_C
Addr_C
7
3Hours
Prefix_C
110
120
130

FIG. 16

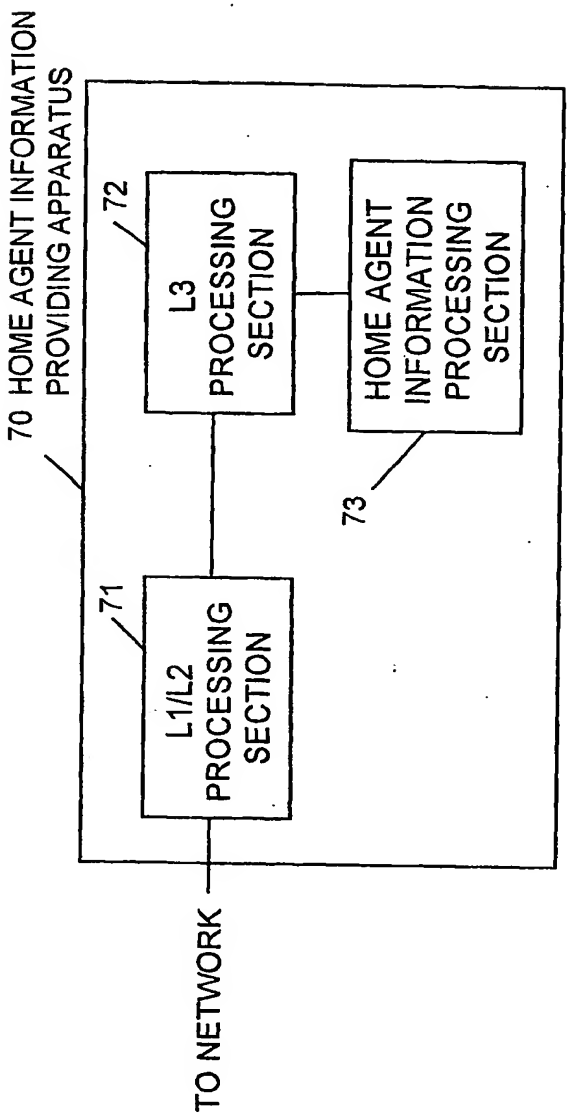

70 HOME AGENT INFORMATION PROVIDING APPARATUS
72
L3 PROCESSING SECTION
HOME AGENT INFORMATION PROCESSING SECTION
73
71
L1/L2 PROCESSING SECTION
TO NETWORK

FIG. 17

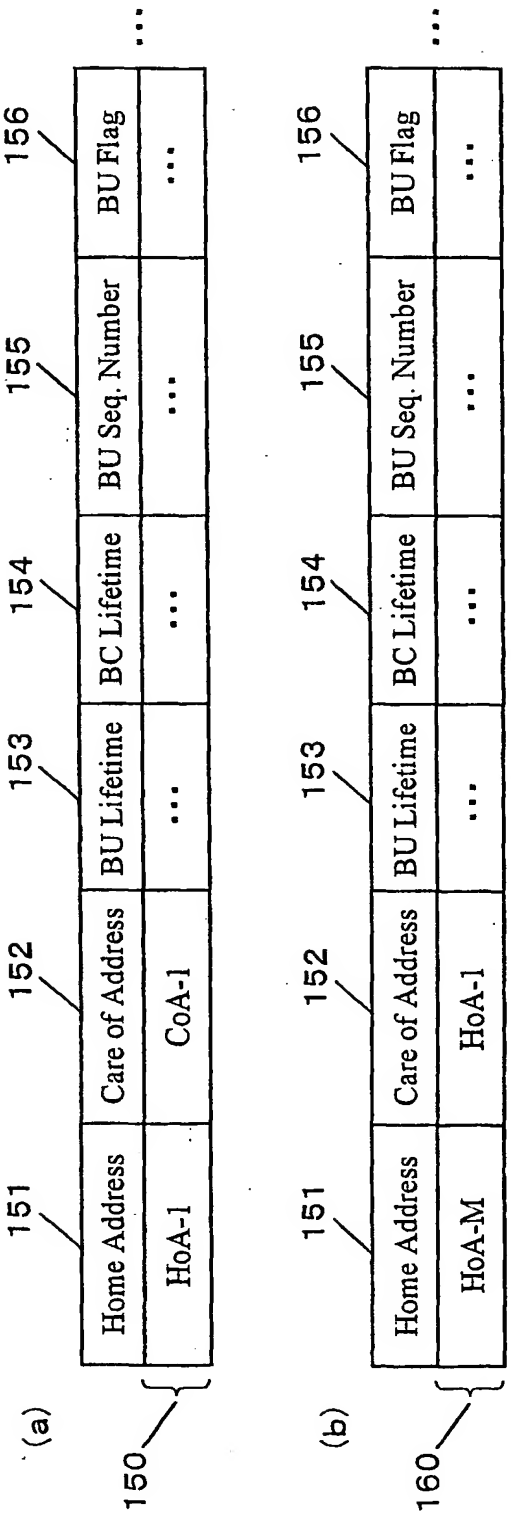

(a)
151
Home Address
HoA-1
152
Care of Address
CoA-1
153
BU Lifetime
154
BC Lifetime
155
BU Seq. Number
156
BU Flag
150
(b)
151
Home Address
HoA-M
152
Care of Address
HoA-1
153
BU Lifetime
154
BC Lifetime
155
BU Seq. Number
156
BU Flag
160

FIG. 18

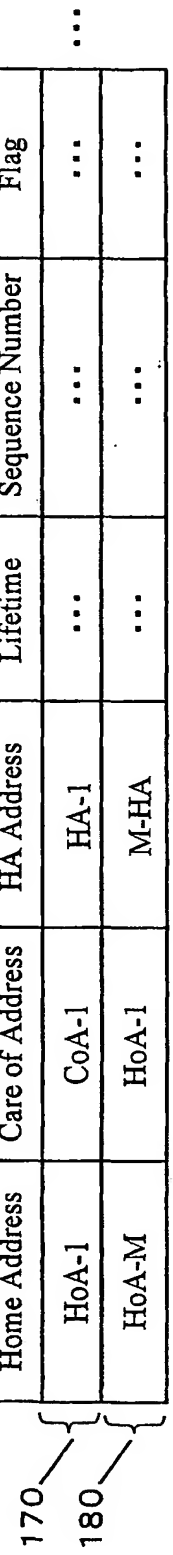

181
182
183
184
185
186
Home Address
Care of Address
HA Address
Lifetime
Sequence Number
Flag
HoA-1
CoA-1
HA-1
...
...
...
HoA-M
HoA-1
M-HA
...
...
...
170
180

FIG. 19

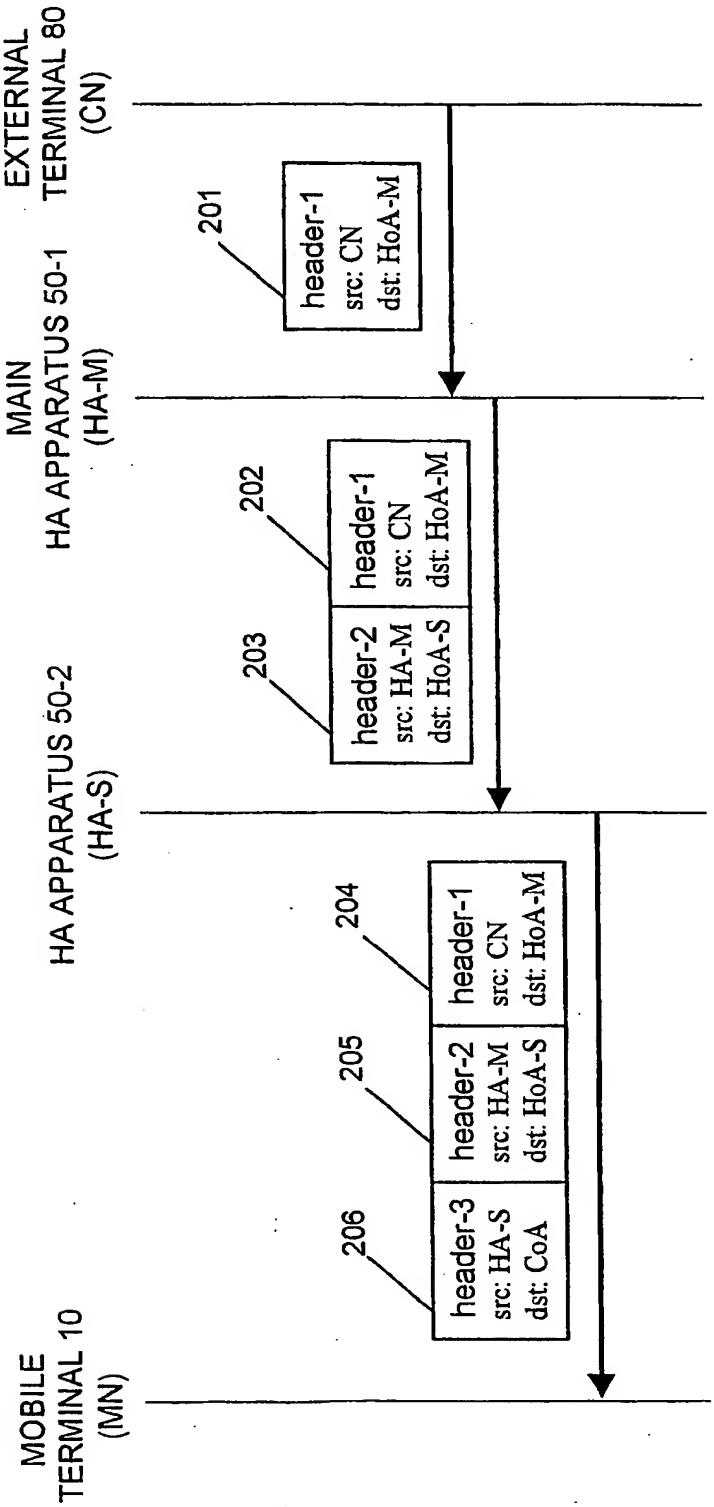

EXTERNAL TERMINAL 80 (CN)
MAIN HA APPARATUS 50-1 (HA-M)
HA APPARATUS 50-2 (HA-S)
MOBILE TERMINAL 10 (MN)
201
header-1 src: CN dst: HoA-M
202
header-1 src: CN dst: HoA-M
203
header-2 src: HA-M dst: HoA-S
204
header-1 src: CN dst: HoA-M
205
header-2 src: HA-M dst: HoA-S
206
header-3 src: HA-S dst: CoA

FIG. 20

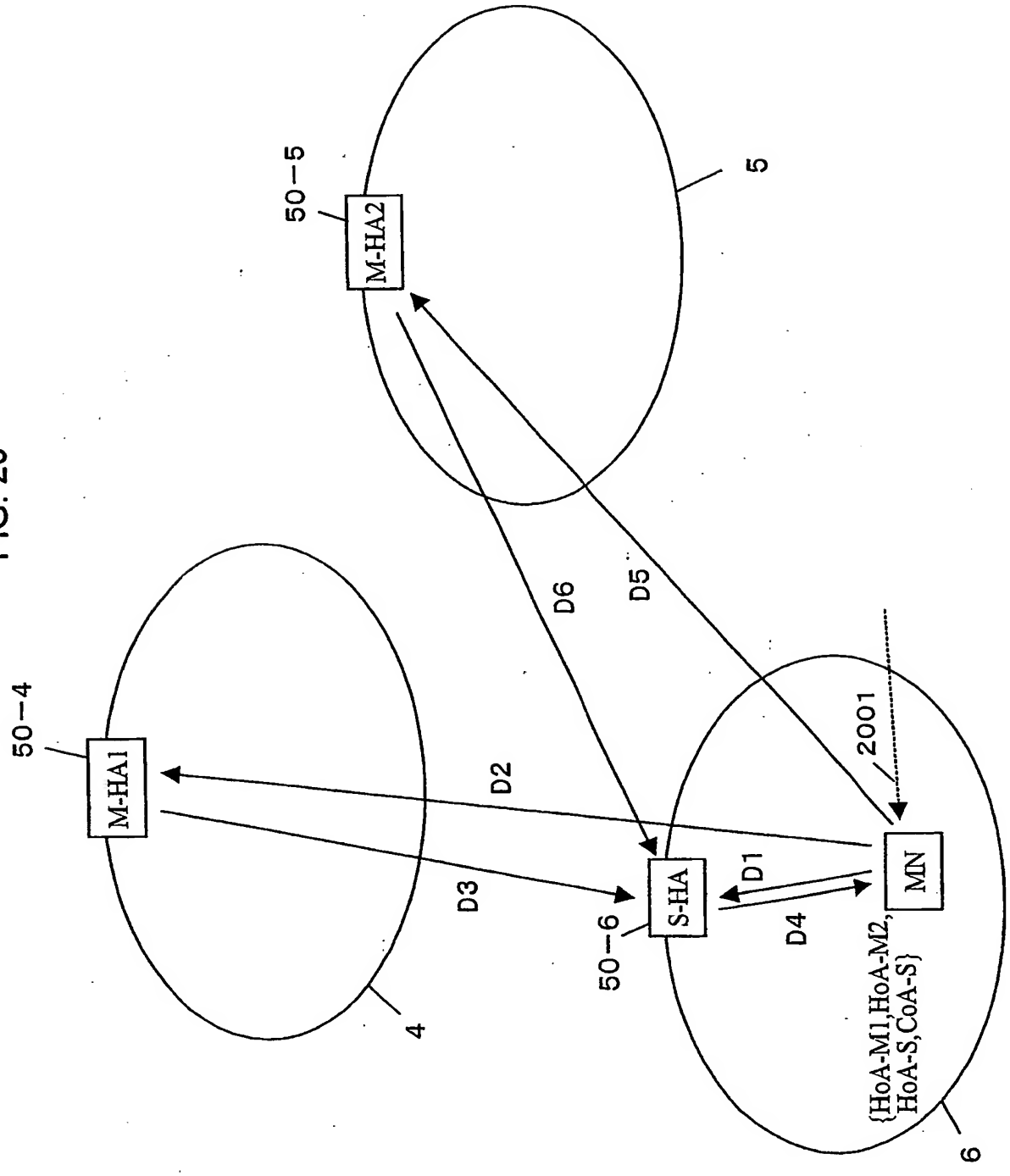

50−5
M-HA2
5
D6
D5
50−4
M-HA1
D2
2001
D3
S-HA
D1
MN
50−6
D4
{HoA-M1,HoA-M2,
HoA-S,CoA-S}
4
6

FIG. 21

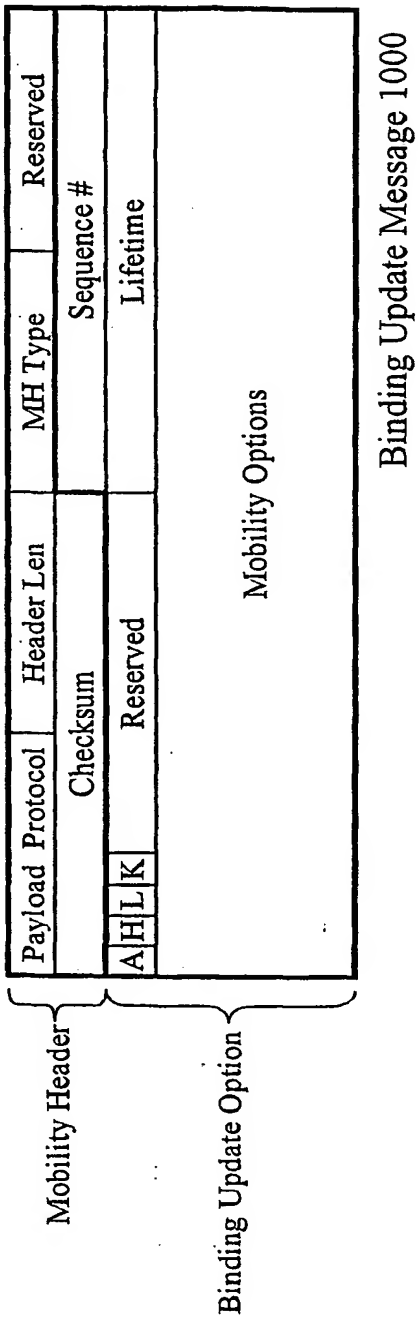
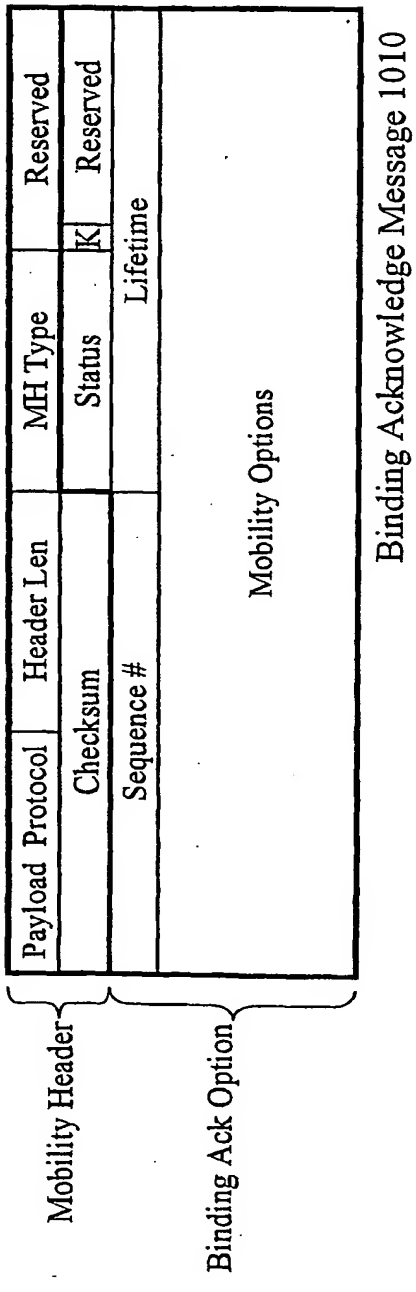

Payload Protocol
Header Len
MH Type
Reserved
Checksum
Sequence #
A
H
L
K
Reserved
Lifetime
Mobility Options
Mobility Header
Binding Update Option
Binding Update Message 1000

FIG. 22


Payload Protocol
Header Len
MH Type
Reserved
Checksum
Status
K
Reserved
Sequence #
Lifetime
Mobility Options
Binding Acknowledge Message 1010
Mobility Header
Binding Ack Option

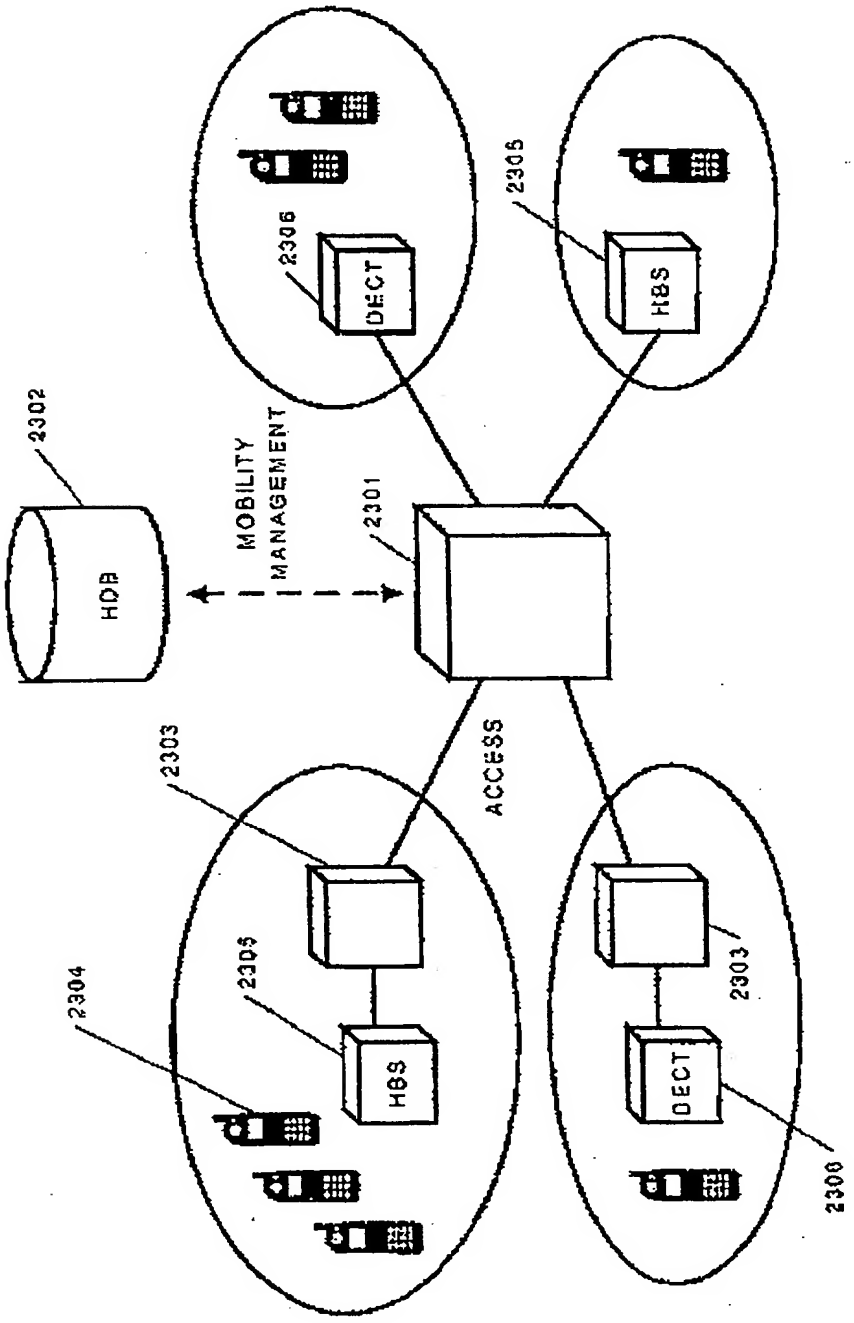

2302
HDB
MOBILITY MANAGEMENT
2301
2306
DECT
2305
HBS
ACCESS
2303
2304
2305
HBS
2303
DECT
2306

FIG. 23